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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,790	06/27/2003	Alan Michael Jaffee	7302	6842
7590	12/23/2005		EXAMINER	
JOHNS MANVILLE			BOYD, JENNIFER A	
Legal Department			ART UNIT	PAPER NUMBER
10100 West Ute Avenue				
Littleton, CO 80127			1771	

DATE MAILED: 12/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/608,790	JAFFEE, ALAN MICHAEL	
	Examiner	Art Unit	
	Jennifer A. Boyd	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 10 October 2005.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1 – 7, 9, 11 – 23, 25 – 29 and 31 – 33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1 – 7, 9, 11 – 23, 25 – 29 and 31 – 33 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

DETAILED ACTION

Response to Applicant's Remarks

1. The Applicant's Remarks, filed October 10, 2005, have been entered and have been carefully considered. Claims 1 – 7, 9, 11 – 23, 25 – 29 and 31 – 33 are pending. The invention as currently claimed is found to be unpatentable for reasons herein below.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

3. Claims 1 – 7, 9, 12 – 15, 17 - 18, 29 and 33 remain rejected under 35 U.S.C. 102(b) as being anticipated by Graves (US 5,389,716). The details of the rejection can be found in paragraph 5 of the Office Action dated May 31, 2005 and paragraph 4 of the Office Action dated July 20, 2005. The rejection is maintained.

Claim Rejections - 35 USC § 102/103

4. Claims 28 and 32 remains rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Graves (US 5,389,716). The details of the rejection can be found in paragraph 5 of the Office Action dated July 20, 2005. The rejection is maintained.

Claim Rejections - 35 USC § 103

5. Claim 16 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Graves (US 5,389,716) in view of Horner, Jr. et al. (US 6,365,533). The details of the rejection can be found in paragraph 7 of the Office Action dated May 31, 2005. The rejection is maintained.

6. Claim 26 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Graves (US 5,389,716) in view of Carbo et al. (US 2004/0209071). It should be noted that this rejection has been previously applied and is currently amended to account for a typographical error.

Graves teaches the claimed invention above but fails to teach that the core further comprises a biocide.

Carbo is directed to a mold resistant acoustical panel (Title). Carbo notes that attempts have been made to reduce microbe growth by introducing biocides, such as fungicides and bactericides, into coatings for acoustical panels. Although some protection against microbe growth is obtained, it is short-lived under severe conditions. When the entire panel contains nutrients for microbes, the relatively small amount of biocide in the coating may not be sufficient to protect the larger amount of food available in the core of the panel (page 1, [0006]). Carbo teaches that the composition of the present invention protects the core of the panel, a function which is not guaranteed by antimicrobial coatings. The biocide in the core affords protection to the entire panel, even if no coating is used (page 2, [0013]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a biocide into the core as suggested by Carbo in the composite of *Graves* motivated by the desire to afford microbe growth protection to the entire panel (Carbo, pages 1 – 2).

7. Claims 25 and 27 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Graves (US 5,389,716) in view of Lehnert et al. (US 4,647,496). The details of the rejection can be found in paragraph 10 of the Office Action date May 31, 2005. The rejection is maintained.

8. Claims 1 – 7, 9, 11 - 14, 17 – 18, 23, 28 - 29 and 32 – 33 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Kajander (US 5,837,621) in view of Gill et al. (US 4,637,951). The details of the rejection can be found in paragraph 9 of the previous Office Action dated July 20, 2005. The rejection is maintained.

Claim 16 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Kajander (US 5,837,621) in view of Gill et al. (US 4,637,951) as applied above, and further in view of Horner, Jr. et al. (US 6,365,533). The details of the rejection can be found in paragraph 10 of the Office Action dated July 20, 2005. The rejection is maintained.

9. Claim 26 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Kajander (US 5,837,621) in view of Gill et al. (US 4,637,951) as applied above, further in view of Carbo et al. (US 2004/0209071). The details of the rejection can be found in paragraph 10 of the Office Action dated July 20, 2005. The rejection is maintained.

10. Claims 25 and 27 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Kajander (US 5,837,621) in view of Gill et al. (US 4,637,951) as applied above, further in view

of Lehnert et al. (US 4,647,496). The details of the rejection can be found in paragraph 12 of the Office Action dated July 20, 2005. The rejection is maintained.

11. Claims 1 – 7, 9, 11 - 14, 18 – 23, 28 - 29 and 31 – 33 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Jaffee et al. (US 6,187,697) in view of Gill et al. (US 4,637,951). The details of the rejection can be found in paragraph 13 of the Office Action dated July 20, 2005. The rejection is maintained.

Response to Arguments

12. Applicant's arguments filed October 10, 2005 have been fully considered but they are not persuasive.

Applicant argues that Graves does not teach the particular range limitations of Applicant's claims. Applicant argues that the Examiner's analysis fails to address how present claim 1, which delineates a non-woven fibrous mat characterized by a far more specific and narrow ranges than any mat generally or specifically disclosed or suggested by Graves, rises to the level of specificity required to constitute anticipation under Lee. Applicant has provided a Table on page 5 of the Arguments indicating the required features of the instant application and of Graves. Applicant requires that the chopped glass fiber average diameter is between 8 – 17 microns while Graves requires 3 – 30 microns. Applicant requires a fine staple fiber average diameter of less than 5.5 microns while Graves requires 2 – 6 microns. Applicant requires the proportion of fine staple fibers to be 1 – 30% while Graves requires 0 – 100%. Applicant has noted on page 7 of the Arguments that "If the claims are directed to a narrow range, the reference

teaches a broad range, *and there is evidence of unexpected results within the narrow range*, depending on the facts of the case, it may be reasonable to conclude that the narrow range is not disclosed with ‘sufficient specificity’ to constitute an anticipation of claims. The unexpected results may also render the claims unobvious”. MPEP 2131.03. The Examiner agrees that Graves teaches a broad range of glass fiber diameter, fine staple fiber diameter and proportion of fine staple fibers, however, the disclosure of Graves still overlaps the Applicant’s claimed ranges. As discussed in the MPEP, the Applicant must provide evidence of unexpected results within the narrow range to show lack of anticipation and/or unobviousness. Applicant indicates that evidence of unexpected results for the narrower range is shown in the Specification, in particular in the analysis and discussion of the Comparative Example 1 and the Examples. The Examiner submits that Comparative Example 1 does not provide a fair comparison because it only shows the results of one data point where the chopped glass fiber diameter is 13 microns and is present in the amount of 79% by weight. The showing of a low smoothness rating for the Comparative Example does not provide evidence that other data points outside the claimed range would show a similarly low smoothness rating. Additionally, Comparative Example 1 does not take into account the use of a combination of chopped glass fibers and fine staple fibers as claimed by Applicant and discussed by the prior art reference, Graves. In order to show unexpected results, the Applicant must compare the closest prior art (in this case, Graves) with the claimed invention. If the Applicant can provide evidence at multiple data points that the claimed ranges result in an unexpected smooth surface and compare to multiple data points outside Applicant’s claimed ranges but within the ranges of Graves result which have a low smoothness rating, the Applicant will provide a proper showing of unexpected results.

Applicant argues that Graves fails to recognize the particular properties of Applicant's claimed mat which render it advantageous for use as a gypsum facer. It should be noted that "The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art for all they contain". *In re Heck*, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)). See MPEP 2123. Additionally, it should be noted that Applicant does not claim these properties.

Applicant argues that the rejections of Graves in view of Horner, Graves in view of Carbo and Graves in view of Lehnert do not cure the lack of disclosure of Applicant's claimed invention. Please see the discussion above regarding the disclosure of Graves.

Applicant traverses the Examiner's motivation for combining Kajander in view of Gill.

For the purposes of review, Kajander teaches a gypsum wall board having facer components comprising a nonwoven mat containing glass fibers having diameters in the range of 3 – 30 microns, most preferably 10 – 17 microns (column 7, lines 10 – 25). Kajander teaches that the fibers can be up to about 3 inches in length (column 7, lines 20 – 30). Kajander notes that generally the longer the fiber, the higher the tensile and tear strengths of the mat, but the poorer the fiber dispersion (column 7, lines 25 – 30). Kajander notes that the glass fibers used normally have about the same length but fibers of different lengths and *diameters* can be used to get different characteristics in a known manner (column 7, lines 20 – 27). Kajander teaches the use of 10 – 40% weight percent of binder based on the total weight of the glass fibers (column 8, lines 35 – 40). It should be noted that Kajander acknowledges that a combination of glass fibers with different diameters can be used. Gill is directed to fibrous mat facers with improved strike-

through resistance (Title). Gill teaches glass mats comprising a mixture of two types of glass fibers, both being glass monofilament fibers (column 3, lines 5 – 10). The first type, or base fibers, comprise glass monofilament fibers of conventional form and composition. Generally, these fibers are made by a continuous filament process and chopped to discrete and predetermined lengths and range from 8 – 25 microns in diameter (column 3, lines 15 – 25). Gill notes that the lower diameter limit is set by process restraints. The upper limit is determined by material usage considerations as well as hand or feel of the final mat material. The coarser fibers result in an abrasive and irritating feel which would make such a mat undesirable (column 3, lines 20 – 25). The other basic fibers in the mat are microfibers having a mean diameter range from 0.05 to 3.5 microns (column 3, lines 40 – 58). Gill teaches that the lower practical amount of microfibers ranged from about 2 – 37% (column 6, lines 10 – 30). Applicant argues that there is no indication in the recited passage that the hand and feel of the mat relate to the microfiber content. It should be noted that Gill only teaches the use of two types of glass fibers. It is reasonable to assume that the desire to restrict the amount of coarse fibers due to the hand and feel of the mat correlates with the properties imparted by the microfibers. Therefore, there is sufficient motivation to combine Kajander and Gill.

Applicant argues that Kajander in view of Gill does not teach the particular range limitations of Applicant's claims. Applicant argues that the Examiner's analysis fails to address how present claim 1, which delineates a non-woven fibrous mat characterized by a far more specific and narrow ranges than any mat generally or specifically disclosed or suggested by Kajander in view of Gill, rises to the level of specificity required to constitute anticipation under Lee. Applicant has noted on page 7 of the Arguments that "If the claims are directed to a narrow

range, the reference teaches a broad range, *and there is evidence of unexpected results within the narrow range*, depending on the facts of the case, it may be reasonable to conclude that the narrow range is not disclosed with ‘sufficient specificity’ to constitute an anticipation of claims. The unexpected results may also render the claims unobvious”. MPEP 2131.03. The Examiner agrees that Kajander in view of Gill teaches a broad range of glass fiber diameter, fine staple fiber diameter and proportion of fine staple fibers, however, the disclosure of Kajander in view of Gill still overlaps the Applicant’s claimed ranges. As discussed in the MPEP, the Applicant must provide evidence of unexpected results within the narrow range to show lack of anticipation and/or unobviousness. Applicant indicates that evidence of unexpected results for the narrower range is shown in the Specification, in particular in the analysis and discussion of the Comparative Example 1 and the Examples. The Examiner submits that Comparative Example 1 does not provide a fair comparison because it only shows the results of one data point where the chopped glass fiber diameter is 13 microns and is present in the amount of 79% by weight. The showing of a low smoothness rating for the Comparative Example does not provide evidence that other data points outside the claimed range would show a similarly low smoothness rating. Additionally, Comparative Example 1 does not take into account the use of a combination of chopped glass fibers and fine staple fibers as claimed by Applicant and discussed by the prior art reference, Kajander in view of Gill. In order to show unexpected results, the Applicant must compare the closest prior art (in this case, Kajander in view of Gill) with the claimed invention. If the Applicant can provide evidence at multiple data points that the claimed ranges result in an unexpected smooth surface and compare to multiple data points outside Applicant’s claimed

ranges but within the ranges of Kajander in view of Gill result which have a low smoothness rating, the Applicant will provide a proper showing of unexpected results.

Applicant argues the Examiner's reliance on *In re Boesch* and submits that the reliance on *Boesch* is misplaced. Applicant argues that the Examiner has not identified any disclosure or suggestion that the alleged result effective variable has the effect of producing a smooth board. by claim 14. It should be noted that "The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art for all they contain". *In re Heck*, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)). See MPEP 2123. Although Gill may not discuss how the ranges would affect the smoothness of the board, Gill does indicate that the fiber diameter range is a known result effective variable by indicating that "fiber diameter is dictated by process restraints for the lower limit and material usage considerations and hand for the upper limit. The coarser fibers result in an abrasive and irritating feel which would make a mat less desirable (see Gill, column 3, lines 15 - 25). If Applicant submits that the claimed ranges result in unexpected smoothness, the burden is upon the Applicant to provide evidence as discussed in detail above.

Applicant argues that the rejections of Kajander in view of Gill and Horner, Kajander in view of Gill and Carbo and Kajander in view of Gill and Lehnert do not cure the deficiencies of Kajander in view of Gill. The Examiner submits that Kajander in view Gill render Applicant's invention obvious as discussed above.

Applicant argues that Jaffee fails to teach that the inventive mat can be used as a facer for a gypsum board. The Examiner points to column 1, lines 1 – 15, where Jaffee discusses the use

of a the mats of Jaffee as a facer for all types of board. Although in this passage Jaffee does not particularly disclose gypsum boards, in lines 30 – 35 of the same column, Jaffee acknowledges that similar mats are used to face gypsum boards. The Examiner submits that this provides a teaching to use the mat as a facer for a gypsum board.

Applicant argues that the material of Jaffee is a two-layered mat while the facers of the instant invention are composed of a single layer. The Examiner submits that a two-layered mat can be considered to be “a layer”. It should be noted that the Applicant does not claim a “single layer”.

Applicant argues that Gill does not cure the deficiencies of Jaffee in regards to the claimed ranges. Please see the discussion above in regards to the disclosure of Gill.

Applicant argues that Gill teaches an air permeability of no more than 225 cubic feet/min while Applicant claims at least 250 cubic feet/min in claim 32. The Examiner submits that the Gill reference is not relied upon for teaching a level of permeability and used only as a secondary reference to teach the combination of microfibers and chopped glass fibers with a certain diameter range.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Boyd whose telephone number is 571-272-1473. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jennifer Boyd
December 18, 2005


Ula C. Ruddock
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